SOME FLUCTUATIONS IN THE MINERAL CONTENTS OF THE KAW RIVER.

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UNDER the joint auspices of the State Board of Health and the United States Geological Survey a systematic examination of the river waters of Kansas was begun in November, 1906. Samples were collected daily from all of the larger streams of the state and forwarded to the department of chemistry of the University of Kansas for analysis. The results of these analyses are now being prepared for publication by the United States Geological Survey.

An examination of the analyses of the Kaw river water made previously by various chemists reveals the fact that the chlorin content is very variable. In a number of cases chemists not residing in the state, and unaware of this fact, have condemned this water on the basis of high chlorin being evidence of sewage contamination. While the Kaw is known to be polluted by sewage, the writers do not believe that its chlorin content furnishes any evidence whatever as to the presence or absence of sewage.

During the year 1907 six maxima were observed in the value of the chlorin in the ten-day composite analyses of water daily collected from the Kaw at Holliday. At each of these maxima the number of parts of chlorin per million was sixty or more, while the minimum was as low as eleven parts. An examination of the record of the turbidity of the three tributaries of the Kaw—the Saline, Solomon and Smoky Hill rivers—shows clearly that the maxima referred to are produced by fluctuations in the flow of these saline streams, viz.:

Periods of maximum turbidity.	Cl. maxima of the Kaw.
Smoky Hill, January 18–29.....	January 29 to February 7.
Smoky Hill, March 27 to April 7....	April 12-23.
Smoky Hill, May 3-15.....	May 14–23.
Saline, June 23 to July 5.	
Solomon, June 27 to July 8.....	June 30 to July 9.
Saline, August 16–26.....	August 29 to September 7.
Saline, September 29 to October 10.	October 9–18.

Similar variations are observed in the quantities of other constituents.